Mr. Ewen MacIntyre was nominated for membership.

The announced paper of the evening on "The Rubber Forests of Mexico" was then presented by Dr. H. H. Rusby. The lecture was illustrated by lantern slides made from photographs, many of which were obtained by the speaker while in the field. This paper has been printed in full in the January number of the Journal of the New York Botanical Garden, and an abstract accompanied by illustrations will appear at an early date in TORREYA.

The meeting adjourned at 9:40 P. M.

PERCY WILSON,
Secretary

OF INTEREST TO TEACHERS

COLLEGE ENTRANCE BOTANY

A fourth report on the college entrance course in botany has been formulated by the Committee on Education of the Botanical Society of America. In authorizing the publication of this report * the Society urges that a year's thorough work in botany be accepted by *all* colleges as an "entrance option" for under the present educational conditions it is "practically impossible for any subject to receive suitable consideration in the three upper years of most high schools unless it can be counted for entrance to college."

The "ten principles upon which the course is formulated" are given below, and the general statement of the subject-matter will, for lack of space in this issue, be printed next month. The preparation of such a course of study is not an easy matter; and the work of the members of the committee, Professor W. F. Ganong, of Smith College, Professor F. E. Lloyd, of the Alabama Polytechnic Institute, and Professor H. C. Cowles, of the University of Chicago, should receive our hearty appreciation. Thanks are also due the Society for the effect such a course will have upon the teaching of botany in the high schools — both directly and indirectly. What do the teachers of high school

* The School Review, Vol. 16. November, 1908.

botany think of the following principles upon which the course is based? From them the committee should receive most helpful criticisms. Here, as indicated by the committee in the last paragraph of this paper, is an opportunity by the high school teachers to help form the "college requirements" which are so generally denounced in all secondary subjects.

PRINCIPLES UPON WHICH THE COURSE IS FORMULATED

1. It is founded upon the two important reports of the National Educational Association — the "Report of the Committee of Ten" (Washington, 1893), and the Report on College Entrance Requirements (Chicago, 1899). These have been modified in accord with the results of more recent experience, and the advice of leading teachers.

2. While intended primarily as an option for entrance to college, it is designed equally for the education in the high school of the general student who can follow the subject no farther; there are in botany no advantages in having the college preparatory and the general educational courses different, at least none that are at all commensurate with the additional burden thus laid upon the schools.

3. It is designed to yield a mental discipline fully equal in quality and quantity that yielded by any other subject studied for the same length of time.

4. It should, if possible, have as a foundation a considerable body of botanical fact learned through nature-study in the lower schools; it should be given in one of the three upper years as part of a four years' high-school course in the sciences: it should be considered and treated as an elementary or preliminary course leading to second courses in college, and colleges accepting the option should arrange second courses to articulate economically with it.

5. The immediate plan of its construction is very simple, namely, to include those topics in the leading divisions of the subject which most teachers now regard as fundamental, whether for their value in scientific training, or as knowledge; but the individual teacher is left free to follow his own judgment as to sequence

of topics, text and other books, and special methods. Advice is occasionally offered, however, upon important points in which most teachers are now known to agree.

6. It recognizes the existence of, and provides for, two modes of procedure in the sequence of topics. In one, which is that strongly advised by the committee, the general facts of plant structure and function, permitting a beginning with large and familiar objects and phenomena, are first studied, to be followed later by a study of representatives of the groups of plants from the lower to the higher ; in the other the study of the groups is the backbone, as it were, of the course, which begins with the lowest forms and introduces the physiological and morphological topics at appropriate places in the ascending series. The two modes, however, lead to substantially the same result, and a common examination is practicable for both.

7. The amount of work in the course is designed to occupy a a year of five periods a week under good conditions. Where special circumstances, such as exceptional difficulty of obtaining material, etc., prevent the completion of the entire amount while allowing its equivalent in thoroughness, it is recommended that some of the minor topics here and there be omitted rather than that the attempt be made to cover all superficially. To provide for this possibility the examination papers should always include a number of alternative questions.

8. The time per week, inclusive of recitation, preparation, and laboratory should be the same as for any other subject. Where five periods a week, with an hour of preparation for each, are demanded for other studies, this course should receive the equivalent of two recitation periods with their preparation, together with three double (not six separated) periods in the laboratory. Variation from this should be towards a greater, not a lesser proportion of laboratory work. The preparation of records of the laboratory work, in which stress is laid upon diagrammatically accurate drawing and precise and expressive description, should be regarded as an integral part of the course ; and these records, preferably in a notebook, should be counted at least one-third towards the students' standing.

9. The course is arranged in two parts, each occupying a half-year and complete in itself. This is in part to accord with principle 6, preceding, and in part to allow either a combination of a half year of botany with a half year of zoölogy to form a year's course in biology, or else to provide a shorter course as needed in some schools. In any case a half-year course in botany should consist of Part I or Part II, never of a combination of both, a recommendation based partially upon educational principle and partly upon the practical difficulty of providing examinations and articulating later college courses with such diverse combinations.

10. The course is intended to be relatively permanent, yet is modifiable in adaptation to changing educational conditions and the approved results of experience. Changes will not, however, be made for some time, and not until announced in a fifth edition of this report. The committee will welcome all suggestions and criticisms.

Those interested in the theories of sex-heredity will find an interesting paper on "A Mendelian View of Sex-heredity" by Professor W. E. Castle, of Harvard, in *Science*, for March 5, 1909; in this paper Professor Castle brings "into harmony the seemingly discordant results of Wilson, of Correns, and of Bateson and his associates."

NEWS ITEMS

A company called "The Luther Burbank's Products Company, Incorporated" has recently been formed with a capitalization of several million dollars. The company will attend to business matters connected with Mr. Burbank's work, and control the distribution of his new productions.

Dr. N. L. Britton, director-in-chief of the New York Botanical Garden, accompanied by Mrs. Britton and Dr. Marshall A. Howe, curator of the museums, sailed for Jamaica, February 20. They expect to spend about six weeks visiting the eastern parts of Jamaica and Cuba, and possibly some of the southwestern Bahamian islands.